REMARKS/ARGUMENTS

Claims 1 to 5, 7 to 9, 11 to 13, 15, 17 to 22, 38 to 45, 55, 56 and 58 to 65 remain in this application. Claims 6, 10, 14, 16, 23 to 37, 46 to 54 and 57 have been cancelled, without prejudice. Claims 6, 10, 14, 16 and 57 are newly canceled and claims 61 to 65 are newly added.

Claim 1 has been amended to improve definiteness. The regions that include the gloss controlling agents are portions of the thermoset top coat and not a surface.

Claims 3 to 5, 7 to 9, 11 to 13, 15, 17 to 22, 59 and 60 were amended to improve definiteness and remove any implication of process limitations. "Radiation curable composition" has been changed to "thermoset top coat." "UV-curable composition" has been changed to "thermoset top coat."

Claim 4 has been rewritten in independent form with all of the limitations of claim 1 from which it originally depended.

The claim dependency of claims 11 to 13 and 17 to 22 have been changed. Claims 11, 17 and 19 to 22 now depend on new claim 63, which is the same scope as claim 9, but without process limitations and without the requirement that the top coat be a thermoset top coat. Claim 12 now depends on claim 11. Claim 18 now depends on claim 17.

Process limitations is claims 11 and 17 to 22 were either removed or converted to structural limitations. Exposure to UV irradiation and/or heat requires a photoinitiator, thermal initiator or combinations of the two initiators. Exposure to EB irradiation does not require a photoinitiator.

The only change to claim 9 was to correct the typographical error of "UV curable" to "UV-curable." The only change to claim 38 was to correct the clerical error by inserting "and" between elements b) and c).

New claims 61 to 65 were added to more definitely define the invention. Claim 61 clearly indicates that the thermoset top coat includes a photoinitiator in both the first and second regions.

Claim 62 clearly indicates that the same photoinitiator is used in the first region, the second region and in the patterned layer. Therefore, while the same photoinitiator is present in both the first and second regions of the thermoset top coat and patterned layer, the concentration of the photoinitiator is different between the first and second regions.

Claim 63 is the same as claim 9 except the process limitations and requirement that the top coat be a thermoset top coat were eliminated. Claim 64 requires the top coat to be a thermoset top coat. Therefore, the scope of claim 64 is the same as claim 9 except the process limitation has been eliminated.

Claim 65 clarifies that the concentration of the flatting agent in the first region varies adjacent the exposed surface and distal the exposed surface. Support for claim 65 is found in the specification at page 4, line 27, to page 5, line 12, allowable subject matter.

Section 103 Rejections

Claims 1 to 22, 38 to 40, 43 to 45 and 55 to 58 were rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidle et al. U.S. Patent No. 4,491,616 in view of Sherman et al. U.S. Patent No. 5,985,416. Applicants have made numerous amendments to the claims, mainly to improve definiteness, remove process limitations and correct

clerical errors. Process limitations have been converted into structural limitations in most instances.

The scope of independent claims 1, 9 and 38 has not been changed. While claim 1 has been amended to improve definiteness, claims 9 and 38 clearly have been amended merely to correct clerical errors (correcting a misspelling and inserting the connector "and" between the last two elements). Since the scope of claims 1, 9 and 38 has not changed, Applicants respectfully assert that if a new rejection is made with respect to any of claims 1, 9 or 38, all of the remaining claims must be examined whether the amendments to the remaining claims raise new issues or not.

Independent claims 1, 9 and 38, and rewritten independent claim 4 require a thermoset top coat. The Examiner acknowledges that Schmidle does not teach a thermoset top coat. He looks to Sherman for a teaching of a thermoset top coat and combines the teachings of Sherman and Schmidle. As correctly noted by the Examiner, Schmidle and Sherman are analogous and Sherman teaches that thermoset top coats can resist discoloration and degradation. However, substituting the wear layer of Sherman for the wear layer of Schmidle destroys the invention of Schmidle. Therefore, the combination of Schmidle and Sherman is improper.

Schmidle teaches a method of making a surface covering by applying a wear layer comprising a radiation curable composition directly on a composition layer containing a photoinitiator, which photoinitiator containing composition was printed on selected areas of a base layer. The entire structure is subjected to actinic radiation and those regions of the wear layer into which the photoinitiator migrated retains a dull, matte finish when the surface covering is heated in a fusion oven at elevated temperatures to blow the foamable

layer and fuse the wear layer. The regions of the wear layer without photoinitiator become relatively sleek, glossy or lustrous. See the Abstract; column 2, lines 1 to 29; column 3, lines 54 to 62; column 10, lines 6 to 22; and column 15, lines 3 to 14, for example.

Particularly note column 11, line 66, to column 12, line 4, and the wear layer formulation at column 16, lines 31 to 39. The wear layer composition does not contain photoinitiator. The only regions of the Schmidle wear layer that polymerizes are the predetermined portions that lie over the printing ink composition that contains photoinitiator.

The thermoset top coat of Sherman completely polymerizes. Otherwise the desired resistance to discoloration and degradation would not occur. Therefore, the Sherman top coat composition contains photoinitiator. If the Sherman top coat composition were substituted for the Schmidle top coat composition, the entire Schmidle top coat would polymerize when subjected to the actinic radiation and, as taught by Schmidle, yield a dull, matte finish. This is contrary to the invention of Schmidle, which is to yield some areas of dull, matte finish and some areas of sleek, glossy or lustrous finish by applying radiation to polymerize some areas (dull areas) that contain photoinitiator and not cure other areas (glossy areas) that do not contain photoinitiator.

Therefore, the combination of Schmidle and Sherman is improper and the claims requiring a thermoset top coat must be allowed. Specifically, since independent claims 1, 4, 9 and 38 require a thermoset top coat, these claims and all of the claims independent on them are allowable over Schmidle in view of Sherman.

Claim 9 has been "rejected because [it is a] product-by process claim[]." See the middle of page 3 of the Office Action. While the Examiner may be correct that "process limitations are given no weight in product claims" (last sentence of the carryover paragraph on pages 3 and 4), the other limitations of the claim must be considered. Claim 9 requires a thermoset top coat. Therefore, for the reasons discussed above, claim 9 is allowable over Schmidle in view of Sherman.

Further claim 9 requires the thermoset top coat to include a flatting agent. The Examiner looks to column 5, lines 1 to 8, of Schmidle for a suggestion of a top coat comprising a flatting agent. However, the cited section of Schmidle describes the backing layer and not the top coat. Therefore, there is no teaching or suggestion in Schmidle of a top coat comprising a flatting agent.

Further, clay and limestone fillers disclosed by Schmidle, as well as pigments, are not flatting agents. Those of ordinary skill in the art, as reflected by patents assigned to numerous companies in the floor covering industry and the floor coating composition industry, do not equate flatting agents with fillers and pigments. See Shalov et al. U.S. Patent No. 5,830,937, assigned to Congoleum Corporation, column 16, lines 8 to 39 (The present compositions may also contain other constituents as are known and available, including ... fillers such as clay and limestone .... A flattening agent such as fine silica may be used for conventional purposes to change the gloss and shine of the coating"; Shultz et al. U.S. Patent No. 5,670,237, assigned to Mannington Mills, column 9, lines 26 to 29 (The final coating may contain a flatting agent to control the gloss. Such coating ... normally will have little pigment or filler therein"; Tsuei U.S. Patent No. 5,643,669 assigned to 3M, column 7, lines 15 to 18 (The low VOC curable coating compositions of

the present invention can include other optional additives such as colorants, flattening agents, ... fillers and the like"; Zimmer et al. U.S. Patent No. 4,358,476, assigned to Lord Corporation, column 13, lines 39 to 45 (The compositions of the invention can also contain ... pigments, fillers, flattening agents ... and other additives typically present in coating compositions. Such additive materials are well known ... and require no further elaboration"; and Allan U.S. Patent No. 3,800,013, assigned to GAF Corporation, column 11, lines 59 to 62 (This final coating may contain a flatting agent to control gloss. Such coating ... normally will have little pigment or filler therein." Therefore, claim 9, as well as claims 4 and 63, is allowable for this reason.

If the Examiner disagrees that those of ordinary skill in this field know that flatting agents are not pigments or fillers, he is respectfully requested to support his position. Otherwise, claims 4, 9 and 63, which include flatting agents in the top coat, and the claims dependent thereon, should be allowed.

In the first sentence of the carryover paragraph on pages 2 and 3 of the Office Action, the Examiner takes the position that "Schmidle discloses ... a wear layer ... comprising a radiation curable composition with regions of low and high gloss levels wherein the regions comprise a photoinitiator" followed by the parenthetical phrase "photoinitiator and cure altering agent" referring to column 4, lines 64 to 68 of Schmidle. If the parenthetical phrase is suppose to indicate that Schmidle teaches the use of cure altering agent in the top coat, he his incorrect. The cited passage describes the Schmidle base layer.

Further, the present specification defines "cure altering agents" to be "photosensitizers, promoters and inhibitors." Cure altering agents are not photoinitiators.

See page 7, lines 23 to 25. Photoinitiators create radicals that initiate polymerization. Cure altering agents either promote or inhibit curing. See page 8, lines 3 to 9, of the present specification. Therefore, claims 3, 13 and 56, which include a cure altering agent in the top coat, are allowable over Schmidle.

In the carryover sentence on pages 2 and 3 of the Office Action, the Examiner takes the position that "Schmidle discloses that the wear layer comprises more than one initiator (first and second thermal initiators)," citing column 6, lines 3 to 7. Applicants respectfully disagree. The cited section is discussing the composition of the base layer and not the top coat. The description of the base layer begins at column 4, line 17, of Schmidle and ends at column 6, line 37. The description of the wear layer begins at column 10, line 6. There is no teaching or suggestion in Schmidle of a wear layer comprising two thermal initiators. Therefore, claim 8 is allowable over Schmidle.

Near the middle of page 3 f the Office Action, the Examiner appears to equate heat stabilizers and thermal curing agents and gloss controlling agents ("various heat stabilizers (thermal curing agent and gloss controlling agent") referring to column 4, line 64, to column 6, line 16, of Schmidle. Again, this section of Schmidle refers to the backing layer and not the top coat. If the Examiner maintains his position, he is respectfully requested to support it by pointing to where in the reference such teaching is disclosed or presenting a convincing line of reasoning in light of the teaching of the reference, in accordance with MPEP section 706.02(j).

Near the top of page 5 of the Office Action, the Examiner states that "Schmidle teaches that several types of backing sheets are equally suitable and are utilizable in special situations, such as transparent backing sheets" referring to column 4, lines 17 to

43. The Examiner is respectfully requested to point out where in Schmidle there is a teaching or suggestion that the "special situations" include transparent backing sheets. Otherwise, claim 41 should be allowed.

Claims 21, 60 and 62 require a photoinitiator in both the first and second regions of the top coat. This is contrary to the teachings of Schmidle. Therefore, claims 21, 60 and 62 are allowable over Schmidle.

Claim 22 requires a gloss controlling agent (photoinitiator, thermal initiator and/or cure altering agent) in both the first and second regions. Again, this is contrary to the teachings of Schmidle. Therefore, claim 22 is allowable over Schmidle.

Claim 55 requires the gloss controlling agent to be either a thermal initiator or a cure altering agent. Since this is not taught in Schmidle, claim 55 is allowable over Schmidle.

Applicants respectfully request that a timely Notice of Allowance be issued in the application.

Respectfully submitted,

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